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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION I ONE CONGRESS STREET SUITE 1100 BOSTON, MASSACHUSETTS 02114-2023

December 20, 2005

Mr. Edward Pickering, PE, MBA Senior Compliance Specialist Woodard & Curran 980 Washington Street, Suite 325 Dedham, MA 02026

Dear Mr. Pickering:

This letter is in response to your request for an EPA Region I regulatory interpretation regarding the applicability of Resource Conservation and Recovery Act (RCRA) requirements to the waste and/or wastewaters generated during cleaning of laboratory glassware and implements. In your May 10, 2005 letter to me you ask about a scenario in which laboratory technicians squirt a 70% methanol (ignitable) solution from wash bottles onto items being cleaned in a sink. In your letter you state, "[i]nvariably, when sinks are used for such activities, the water is turned on at a flow rate of approximately one gallon per minute and left on during the entire duration of the process to aid in the cleaning procedure, and to capture and deliver the methanol solution/waste material for discharge into the drain." You infer that this process generates a wastewater which because of dilution will lose its ignitability characteristic. You state that the wastewater is carried through a segregated plumbing system constructed with chemical-resistant piping to a pH adjustment treatment tank, prior to being discharged to a municipal sewer and mixing with domestic sewage. You note that the discharged wastewater is subject to pretreatment requirements under section 307(b) of the Clean Water Act.

Your letter raises the general issue of whether concentrated chemicals may be discharged down laboratory drains. In responding, I first want to emphasize that the EPA considers the discharging of concentrated chemicals down laboratory drains to be a poor environmental practice. In the scenario you describe, the presumable purpose of the methanol solution is to remove contaminants that are not amenable to dissolution and removal by water. Applying the methanol solution in the presence of running water may limit the effectiveness of the methanol and require the application of a greater amount of methanol solution.

A preferred procedure, employed in EPA's own regional laboratory and common throughout academic, research and healthcare facility laboratories, is to apply solvents or solvent solutions over some form of container that can capture excess, spent solvent as it flows off of the glassware/implements being cleaned. This captured spent solvent is then managed as a hazardous waste. Following this step the glassware is then rinsed with running water and only

the smaller volume of residue still adhering to the cleaned surfaces is washed off and discharged down the drain subject to the Clean Water Act.

However, whether the scenario you describe violates RCRA requirements depends in part on the requirements of the States that have been authorized to implement the federal RCRA program. All six New England States in Region I have been authorized to implement this program. All of them have regulations and interpretations of those regulations which address this issue, which generally are more stringent than the minimum federal RCRA requirements and interpretations. Under RCRA, States are entitled to interpret requirements more stringently than the EPA. Thus throughout Region I, it is actually the State RCRA requirements (as interpreted by the States) that must be followed regarding this matter.

Accordingly, I have consulted with the six States before answering your letter. I apologize for the time that this has taken, but am now able to pass along to you that the six New England States generally do not allow the practice suggested in your letter. The regulations and reasoning used by each state may differ from one state to the other, but the general conclusion is consistent across all six states. In relaying the State positions, I am not intending to state or imply what the EPA position would be on these matters. What the minimum federal requirements regarding this matter would be is irrelevant in Region I since all six Region I States have taken more stringent positions with respect to this matter.

Overview of State Requirements

In analyzing the scenario you presented, the six States in Region I have first agreed that the methanol solution becomes a spent material after being utilized for cleaning. Since the solution is ignitable, any undiluted spent solution dripping from the glassware or implements can be expected to be a characteristic hazardous waste (D001). The Land Disposal Restrictions - Treatment Standards for D001 would classify the methanol solution as being in the High TOC Ignitable Characteristics Liquids Subcategory as defined in 40 C.F.R. § 268.40, because a 70% methanol solution, even when mixed with a small volume of other material removed from the item being cleaned, will contain significantly greater than 10% total organic carbon.

A key question is whether the application of the methanol solution should be conducted in the presence of running water. Under the interpretations of the six New England States, combining the solvent rinse and the water rinse into a single integrated step results in intentional dilution of the D001 High TOC Ignitable Characteristic Liquid subcategory waste (the spent solution that could have been kept segregated.) Such wastes are specifically barred from dilution by 40 C.F.R. § 268.3 since a treatment method other than DEACT (deactivation) has been specified in 40 C.F.R. Part 268.40 for this subcategory of the D001 waste code. Thus diluting the methanol

Spent cleaning solutions also may be listed wastes. If a spent solution is a listed waste in addition to being a D001 characteristic waste, this would not change the positions described in this letter.

solution during the first cleaning step and then discharging the resulting wastewater down the drain violates RCRA requirements as interpreted by the six New England States.

It also would violate RCRA requirements as interpreted in the six New England States to discharge the 70% methanol solution down the drain without dilution during the first cleaning step. Without dilution, the methanol solution would remain a hazardous waste when initially discharged. Under their RCRA programs, the six Region I States generally do not allow the discharging down drains of such concentrated hazardous wastes.²

The six New England States agree that the dilute rinsewaters generated by the second cleaning step described above may be discharged subject to Clean Water Act requirements. Use of water during this second step is an appropriate part of the cleaning process rather than intentional dilution, assuming that full efforts already have been made during step one of the cleaning process to capture as much of the hazardous waste as possible. RCRA jurisdiction thus may be avoided if the resulting rinsewaters are not hazardous (i.e., no longer ignitable) at their point of generation in the sink. Each laboratory/generator should determine whether its rinsewaters are hazardous, based either on testing or knowledge of the waste.

If a generator is not confident that its rinsewaters generated by the second cleaning step are non-hazardous, it should assume that they are hazardous, but still may be able to discharge them subject to Clean Water Act requirements in the six New England States. All six States consider a laboratory's pH adjustment treatment tank and associated piping to be a wastewater treatment unit, and all six States have RCRA regulations allowing dilute hazardous wastewaters to be treated in such units and then discharged. However, the requirements regarding wastewater treatment units handling hazardous wastewaters vary from State to State (e.g., a limited RCRA program permit must be obtained in New Hampshire to operate such a unit). Thus a regulated entity proposing to treat and discharge a hazardous dilute wastewater should review the regulations of the relevant State and if necessary contact the RCRA program in that State.

It also should be noted that laboratories discharging hazardous wastewaters into POTWs must file the notifications required by the Pretreatment Program under 40 C.F.R. § 403.12, as well as complying with all other applicable federal, state and local pretreatment program requirements. This notification would not be necessary for laboratories that have determined that their dilute wastewaters generated during the second cleaning step are not hazardous, but such laboratories must of course still meet all other applicable federal, state and local pretreatment program requirements.

All six of the New England states recognize that there may be unusual situations in which it makes environmental sense to discharge a concentrated hazardous waste pursuant to Clean Water Act requirements rather than handling the waste under RCRA. However, since all of them generally do not allow this practice, a regulated entity in New England should not proceed to discharge such concentrated hazardous wastes without advanced approval from or consultation with the RCRA program in the relevant State. Some of the states would require the obtaining of a state permit before discharging a concentrated hazardous waste whereas others would address any special situation by issuing a regulatory interpretation.

Conclusion

We thus conclude that any facility should review a particular State's regulations and consult as necessary with their respective state on the specifics of a discharge of hazardous chemicals down a laboratory drain. It is our additional conclusion that the cleaning procedure you describe, which applies concentrated chemicals in the presence of running water rather than keeping them segregated to the extent possible, is a poor laboratory practice. Based on our consultations with the States, we also advise you that the practice generally is illegal within the six New England States.

Note that this letter has no applicability to States outside Region I, which may require only compliance with the minimum federal requirements and interpretations, or which may have other additional and more stringent requirements and interpretations. Please contact the State official copied below should you have any further questions about the applicability of the RCRA requirements for discharges of hazardous chemicals down a laboratory drain in a particular New England State.

Sincerely,

Mary Rosenstein, Chief

Chemicals Management Branch

cc: Kevin Sullivan, CTDEP

Stacy Ladner, MEDEP

James Miller, MADEP

John Duclos, NHDES

Leo Hellested, RIDEM

Peter Marshall, VTDEP

Betsy Devlin, USEPA - OSW

Jeffry Fowley, USEPA - R1

Ken Rota, USEPA - R1

Ernest Waterman USEPA - R1

William Cass, Director, New England Waste Management Officials Association

December 1, 2005

Mr. Gary Lallo, P.E. Voigt & Schweitzer, Inc. 1000 Buckeye Park Road Columbus, OH 43207

Re: September 8, 2005 EPA Region I Regulatory Interpretation

Dear Mr. Lallo:

This letter is in response to your letter dated October 12, 2005, in which you state that you disagree with a Regulatory Interpretation issued by our office on September 8, 2005. Our interpretation, conveyed in a letter to your consultant Mr. Hank Stonerook of Stone Environmental, concluded that the contaminated zinc chloride solution from your Voigt & Schwietzer (V&S) facility in Taunton, Massachusetts, which is sent to the Zaclon LLC facility in Cleveland, Ohio (Zaclon), is a hazardous spent material being reclaimed, and thus is subject to RCRA regulation. You assert in your letter that the recycled zinc chloride solution is instead an intended by-product of your pre-treatment process which is used as a raw material at the Zaclon facility, and that nothing is reclaimed from that solution.

The basis for our determination in the September 8, 2005 letter begins with the EPA definition for spent material in 40 C.F.R. § 261.1. As we noted, a spent material is a material that has been used, and as a result of such use becomes contaminated to such a point that the material can no longer serve the purpose for which it was produced without further processing. The material in question is the contents of the stripper tank, the stripper solution. In our letter we concluded that the stripper solution was a spent material based on the fact that the virgin material that you use becomes contaminated during your manufacturing process. V&S ships the stripper solution off-site when the stripping tanks need to be recharged due to a build up of zinc chloride and other contaminants in the tank. We further based our conclusion on the fact that your facility is no longer able to use the stripper solution in its process when the decision is made to remove the solution from service and ship it off-site.

The argument that the material is a by-product of your pre-treatment process was not mentioned in the initial letter from your consultant. However, we will address this assertion now. The EPA defines by-product in 40 C.F.R. § 261.1 as including materials such as slags or distillation

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States and the EPA. You may wish to consult with your own legal counsel about this matter.

RCRA requires that your hazardous spent material being reclaimed be handled as a hazardous waste while on site at your generating facility. It further requires that the material be shipped under manifest and only to a facility able to receive manifested hazardous wastes. We urge you to take steps to begin complying with these RCRA requirements as promptly as possible. If Zaclon persists in not taking the steps sought by Region V and Ohio, so as to not be able to legally receive this hazardous waste, you will need to redirect your material to another facility in order to comply with RCRA requirements.

Finally, we wish to clear up some possible confusion about the Massachusetts requirements. In your consultant's initial letter to us, he erroneously stated that if your material is indeed used as a raw material by Zaclon (without reclamation), then no Massachusetts recycling permit is required. Actually, Massachusetts follows the federal requirements by specifying that spent materials being reclaimed must be handled as fully regulated hazardous wastes. However, Massachusetts is more stringent than the federal requirements in specifying that companies that are shipping hazardous secondary materials for reuse without reclamation must file a notification and obtain a Class A recycling permit. Thus, even if Zaclon were to prevail in its litigation, and even if EPA and Ohio then agreed that your material was a material being reused without reclamation and/or a by-product, you would still need to follow the more stringent Massachusetts requirements. For now, however, you should instead follow the full federal and state requirements applicable to fully regulated hazardous spent materials being reclaimed.

Sincerely,

Marv Rosenstein, Chief, Chemical Management Branch

enclosures

cc: William Sirull, MADEP
James Miller, MADEP
Michael Cunningham, EPA Region V
Thomas Nash, EPA Region V
Karen Nesbit, Ohio EPA
Ernie Waterman, EPA Region 1
Jeff Fowley, EPA Region 1
Sharon Leitch, EPA Region 1

Mr. Paul Gowen Environmental Engineer Texas Instruments, Inc. P.O. Box 225214 Dallas, Texas 75265

Dear Mr. Gowen:

This is in response to your letter dated June 18, 1985, regarding the regulatory status of drosses that are sent for reclamation other than in a manner constituting disposal or burning for energy recovery. In particular, you request that I confirm an interpretation given to you by the RCRA/Superfund Hotline that drosses (that are generated in soldering integrated circuits to printed circuit boards) which are sent to a secondary smelter to recover lead are excluded from regulation under the hazardous waste provisions of the Resource Conservation and Recovery Act.

In general, I agree with the interpretation; these solder drosses are defined as by-products under the hazardous waste rules. (A by-product is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process.) Since unlisted by-products (which this material is) sent for reclamation are not defined as solid wastes, these materials are not hazardous wastes. See 40 CFR 261.2 (c) (3); see also 50 FR 633, January 4, 1985, for basis for our decision. Therefore, they are excluded from regulatory control under Subtitle C of RCRA.

You also requested guidance and possible examples of what the differences are between "by-products" and "spent materials." A spent material is a material that has been used and as a result of such use becomes contaminated to such a point that the material can no longer serve the purpose for which it was produced without processing. Put another way, a spent material is a contaminated virgin material that must be reprocessed before it can be reused. The most common examples are: spent solvents, spent acids, spent plating solutions, spent pickle liquor, spent catalysts, and spent lead-acid batteries. By-products, on the other hand, are residues that result from manufacturing or other operations that are not one of the primary products that are produced. Some common examples are 3 distillation residues, slags, drosses, and tank bottoms.

I hope this letter responds to your request; please feel free to give me a call if I can be of any further assistance. My telephone number is (202) 475-8551.

Sincerely,

Matthew A. Straus, Chief Waste Identification Branch

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5

IN THE MATTER OF:) DOCKET No. RCRA-05-2004-0019
Zaclon, Inc.; Zaclon, LLC;)))
Independence Land Development Company;) Honorable Susan L. Biro
2981 Independence Road	Chief Administrative Law Judge
Cleveland, Ohio 44115 EPA ID No. OHD 004 184 768)
Respondents))

COMPLAINT AND COMPLIANCE ORDER

I. SECOND AMENDED COMPLAINT

Preliminary Statement and Jurisdiction

- 1. This is a civil administrative action instituted under Section 3008(a) of the Solid Waste Disposal Act, as amended, also known as the Resource Conservation and Recovery Act of 1976, as amended (RCRA), 42 U.S.C. § 6928(a). RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments of 1984 (HSWA). This action is also instituted pursuant to Sections 22.01(a)(4), 22.13 and 22.37 of the "Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance or Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits" ("Consolidated Rules"), 40 CFR Part 22.
- 2. Jurisdiction for this action is conferred upon U.S. EPA by Sections 2002(a)(1), 3006(b), and 3008 of RCRA; 42 U.S.C. §§ 6912(a)(1), 6926(b), and 6928.

- 61 Fed. Reg. 54950 (October 23, 1996). The U.S. EPA-authorized Ohio regulations are codified at Ohio Administrative Code (OAC) Chapters 3745-49 through 69. See also 40 C.F.R. § 272.1800 et seq.
- 7. Pursuant to Section 3006(g) of RCRA, 42 U.S.C. §6926(g), U.S. EPA must carry out the new requirements promulgated pursuant to the HSWA, Pub. L. 98-616, until such time as the State is authorized to carry out such program. Under the terms of Section 3006(g), the requirements established by HSWA are effective in all States regardless of their authorization status and are implemented by U.S. EPA until the State is granted final authorization with respect to those requirements.
- 8. Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), provides U.S. EPA with the authority to enforce State regulations in those States authorized to administer a hazardous waste program.
- 9. U.S. EPA has provided notice of commencement of this action to the State of Ohio pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2).

General Allegations

- 10. Respondents are Zaclon, Inc., Zaclon LLC, and Independence Land Development
 Company which were and are incorporated under the laws of Ohio. Hereinafter
 the term Respondents is used both collectively and alternatively to refer to all or
 any one of the three entities named above.
- 11. Respondents own and operate a facility located at 2981 Independence Road, Cleveland, Ohio ("the facility").

- treatment sludge, and thus qualified for interim status in accordance with RCRA § 3005(e).
- 21. Dupont submitted a closure plan, dated May 10, 1985, to the Ohio Environmental Protection Agency (OEPA) outlining the activities which would be conducted for the removal of all hazardous waste from the chlorides production process and wastewater treatment sludge from the waste pile storage and treatment area.
- 22. In a letter dated March 5, 1987, OEPA informed DuPont that all activities concerning closure of the pile had been completed, and that DuPont would maintain only the status of a generator.
- 23. One of the Respondents, Zaclon Inc., purchased the facility from DuPont in June of 1987.
- 24. Section 3005(j) and 40 CFR § 270.1(c) requires owners of hazardous waste management units that certified closure after January 26, 1983 to obtain a post-closure permit, unless they demonstrate closure by removal under § 270.1(c)(5) and (6).
- 25. One of the Respondents, Zaclon Inc., submitted an equivalency demonstration, dated June 2, 1992, for closure of the waste pile pursuant to 3005(i) of HSWA and 40 CFR § 270.1(c)(5) and (6).
- 26. U.S. EPA approved Zaclon Inc.'s June 2, 1992, equivalency demonstration by letter dated September 25, 1992.
- 27. Neither DuPont nor any of the Respondents have ever submitted a RCRA Part B permit application for a hazardous waste management unit at the facility.

COUNT 1: Storage of Hazardous Waste Without a Permit or Interim Status

- 37. Complainant incorporates paragraphs 1 through 36 of this Complaint as though set forth in this paragraph.
- 38. The sash and baghouse dust was stored at the facility for at least six years prior to the September 19, 2002, sampling event.
- 39. The sash stored at the facility meets the definition of a by-product found at OAC 3745-51-01(C)(3) and 40 CFR 261.1(c)(3).
- 40. The baghouse dust stored at the facility meets the definition of a sludge found at OAC 3745-51-01(C)(2) and 40 CFR 261.1(c)(2).
- 41. U.S. EPA conducted a Toxicity Characteristic Leaching Procedure (TCLP) test on the ten sash and five baghouse samples collected on September 19, 2002, for cadmium, chromium, and lead using test Method 1311.
- 42. Nine of the ten sash samples had a lead level above the toxicity characteristic regulatory level of 5.0 milligrams per liter (mg/L). Six of the ten sash samples had a cadmium level above the toxicity characteristic regulatory level of 1.0 mg/L.
- 43. Three of the five baghouse samples had a lead level above the toxicity characteristic regulatory level of 5.0 milligrams per liter (mg/L). Four of the five baghouse dust samples had a cadmium level above the toxicity characteristic regulatory level of 1.0 mg/L.
- The sash and baghouse dust stored at the facility at the time of the September 19, 2002, sampling event exhibited the toxicity characteristic for lead and cadmium.
- 45. Pursuant to OAC 3745-51-02(C)(4) and 40 C.F.R. § 261.2(c)(4), sludges and by-

- pile in torn bags in such a manner that the material could escape into the environment, and thus in a manner constituting disposal, for at least six years prior to the September 19, 2002, sampling event
- 52. For at least six years prior to the September 19, 2002, sampling event the sash and baghouse dust stored at the facility was a hazardous waste.
- 53. Section 3005(a) of RCRA, 42 U.S.C. §6925(a) and the regulations at OAC 3745-50-45 [40 CFR Part 270] state that the treatment, storage, or disposal of hazardous waste by any person who has not applied for or received a permit, or interim status, is prohibited.
- 54. Neither U.S. EPA nor the State of Ohio have issued a permit to Respondents' facility to treat, store, or dispose of hazardous wastes.
- As noted in paragraph 28 above, Respondents' facility did not have interim status for the treatment, storage, or disposal of hazardous wastes after November 8, 1985.
- Respondents are therefore in violation of Section 3005(a) of RCRA, 42 U.S.C. §6925(a) and the regulations at OAC 3745-50-45 [40 CFR Part 270].

COUNT 2: Storage of Hazardous Waste Without a Permit or Interim Status

- 57. Complainant incorporates paragraphs 1 through 36 of this Complaint as though set forth in this paragraph.
- 58. An average of about 272,000 pounds per month of spent stripping acid has been, since the mid-1990s, and continues to be, accepted at the facility from at least ten

- 69. Section 3005(a) of RCRA, 42 U.S.C. §6925(a) and the regulations at OAC 3745-50-45 [40 CFR Part 270] state that the treatment, storage, or disposal of hazardous waste by any person who has not applied for or received a permit, or interim status, is prohibited.
- 70. Neither U.S. EPA nor the State of Ohio have issued a permit to Respondents' facility to treat, store, or dispose of hazardous wastes.
- 71. As noted in paragraph 28 above, Respondents' facility did not have interim status for the treatment, storage, or disposal of hazardous wastes after November 8, 1985.
- 72. Respondents are therefore in violation of Section 3005(a) of RCRA, 42 U.S.C. §6925(a) and the regulations at OAC 3745-50-45 [40 CFR Part 270].

II. PROPOSED CIVIL PENALTY

Complainant proposes to assess Respondents a civil penalty of \$394,143 for the violations alleged in this Complaint.

The Administrator of U.S. EPA may assess a civil penalty of up to \$25,000 per day for each violation of Subtitle C of RCRA according to Section 3008 of RCRA, 42 U.S.C. § 6928.

The Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, 31 U.S.C. § 3701, required U.S. EPA to adjust its penalties for inflation on a periodic basis. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, published at 40 C.F.R. Part 19, U.S. EPA may assess a civil penalty of up to \$27,500 per day for each violation of Subtitle C of RCRA occurring or continuing on or after January 31, 1997.

Michael Cunningham
Waste, Pesticides & Toxics Division (DE-9J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

A transmittal letter identifying this Complaint shall accompany the remittance and the copy of the check.

III. COMPLIANCE ORDER

Based on the foregoing, Respondents are hereby ordered-- pursuant to authority in 3008(a) of RCRA, 42 U.S.C. § 6928(a), and § 22.37(b) of the Consolidated Rules-- to comply with the following requirements immediately upon the effective date of this Order:

- 1. Respondents shall not treat, store, or dispose of hazardous waste without a RCRA permit.
- 2. Respondents shall, within 30 days of the effective date of this Order, submit to OEPA for approval a closure plan and documentation of financial responsibility pursuant to OAC 3745-66-10 through 48 [40 CFR Part 265 Subpart G and H] for all hazardous waste storage and treatment units at the facility.
 - 3. Respondents shall implement the closure plan as approved by OEPA.
- 4. Respondents shall notify U.S. EPA in writing upon achieving compliance with this Order within 15 calendar days after the date it achieves compliance. If Respondent has not taken or completed any requirement of this Order, Respondent shall notify U.S. EPA of the failure, its reasons for the failure, and the proposed date for compliance within 10 calendar days after the due date set forth in this Order.

Complaint. The Answer shall also state:

- 1. The circumstances or arguments alleged to constitute the grounds of defense;
- 2. the facts Respondents intend to place at issue; and
- 3. whether Respondents request a hearing.

Where Respondents state that they have no knowledge of a particular factual allegation, the allegation is deemed denied. Respondents' failure to admit, deny, or explain any material fact in the Complaint constitutes an admission of that allegation. Consolidated Rules at § 22.15.

Respondents must file their Answer with the Regional Hearing Clerk (R-19J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604. A copy of the Answer and any subsequent documents filed in this action should be sent to Thomas Nash, Office of Regional Counsel (C-14J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604-3590. Thomas Nash may be telephoned at (312) 886-0552

If Respondents fail to file a timely written Answer to the Complaint, with or without a request for a hearing, the Regional Administrator or Presiding Officer may issue a Default Order pursuant to § 22.17 of the Consolidated Rules. For purposes of this action only, default by Respondents constitutes an admission of all facts alleged in the Complaint and a waiver of Respondents' right to a hearing on the factual allegations under Section 3008 of RCRA, 42 U.S.C. § 6928. Default will also result in the penalty proposed in the Complaint becoming due and payable by Respondents without further proceedings 30 days after issuance of a final order upon default under § 22.27(c) of the Consolidated Rules. In addition, default will preclude Respondents from obtaining adjudicative review of any of the provisions contained in the Compliance Order section of the Complaint.

The issuance of a CAFO shall constitute a waiver of Respondent's right to request a hearing on any stipulated matter in the CAFO.

Dated this H day of October, 2005.

S

Joseph M. Boyle, Chief Enforcement and Compliance Assurance Branch Waste, Pesticides and Toxics Division U.S. Environmental Protection Agency Region 5

Complaint Docket No. RCRA-05-2004-0019

Northeast District Office

2110 East Aurora Road Twinsburg, OH 44087-1924 TELE: (330) 963-1200 FAX: (330) 487-0769 www.epa.state.oh.us

Bob Taft, Governor Bruce Johnson, Lieutenant Governor Joseph P. Koncelik, Director

November 14, 2005

RE: ZACLON LLC

CUYAHOGA COUNTY OHD 004 184 768

LQG CEI NOTICE OF VIOLATION

CERTIFIED MAIL

Mr. John Curry
Quality Assurance/Compliance Regulatory Manager
Zaclon LLC
2981 Independence Road
Cleveland, Ohio 44115-3699

Dear Mr. Curry:

On August 10, 11 and 12, 2005, the Ohio EPA conducted a compliance evaluation inspection (CEI) of Zaclon LLC's (Zaclon), Cleveland, Ohio facility to determine Zaclon's compliance with Ohio's hazardous waste laws and regulations as found in the Ohio Revised Code and the Ohio Administrative Code ("ORC" and "OAC" respectively). Zaclon was represented by Joseph Turgeon, Jon Hall, James Krimmel, Joseph Busovicki and you. Suzanne Prusnek and I represented the Ohio EPA. Mitch Mathews, also with Ohio EPA was present on August 10, 2005.

Zaclon is a manufacturer of both specialty and basic chemicals. These chemicals include ammonium chloride, zinc chloride, chrome complexes, galvanizing fluxes (zinc ammonium chloride), potassium silicate, potassium acetate, and other specialty products including a rubber accelerator.

Zaclon is a large quantity generator of hazardous waste (greater than 1000 kg per month generated). The wastes generated at Zaclon include an ignitable waste (D001) from the production of the accelerator, a heavy metal (cadmium (D006) and lead (D008)) contaminated sludge from the production of zinc chloride, and a heavy metal (D006 and D008) contaminated debris from the use of SASH in the production of zinc chloride. Zaclon also generates a sludge from the production of the galvanizing fluxes currently managed as a hazardous waste for heavy metals (D006 and D008) but this waste may be recharacterized as nonhazardous due to production changes.

Ohio EPA's compliance inspection included an inspection of the facility operations and a review of written documentation. Based on this inspection, Ohio EPA has determined that Zaclon has violated at least the following state hazardous waste regulations:

Violations:

1.a. Establishing and operating a hazardous waste facility without a permit and storing hazardous waste without a permit, Ohio Revised Code (ORC) § 3734.02

Since neither US EPA nor Ohio EPA have issued a permit to Zaclon to store and/or dispose hazardous waste, Zaclon has created a hazardous waste storage and disposal unit subject to the permitting requirements and has been operating the pile without a permit in violation of ORC § 3734.02 (E) and (F) and all the applicable requirements in OAC rules 3745-56-50 through 3745-56-59.

You must immediately begin to control the run off and tracking from the waste pile pad area. Methods to achieve this may include immediate removal of the hazardous waste for appropriate off-site management or containerizing all remaining hazardous waste (SASH material). Also, you must prepare and submit for Ohio EPA's approval a closure plan in accordance with OAC rule 3745-56-58(C).

1.b. Zaclon stored and disposed hazardous waste (baghouse dust) in a waste pile without a permit. U.S. EPA noted during the August 22, 2001 inspection, baghouse dust was being managed on a ledge several feet away from the SASH pile. On September 19, 2002, US EPA took five samples of the baghouse dust. In a letter dated December 17, 2002, US EPA sent the facility a copy of the Method 1311, Toxicity Characteristic Leaching Procedure analytical results for the samples taken during the September 19, 2002 sampling event. The results of the TCLP test indicate that three of the five samples collected were above the regulatory level of 5.0 mg/L for lead. Four of the five samples had cadmium levels above the regulatory level of 1.0 mg/L.

The baghouse dust meets the definition of a sludge per OAC rule 3745-51-01 (C)(2). The material was on site for at least six years and was accumulated speculatively. Since the baghouse dust is a waste and exhibited a characteristic, Zaclon managed/disposed of a hazardous waste without a permit, in violation of ORC § 3734.02(E) and (F).

Per Zaclon, since US EPA's 2001 inspection all of the baghouse dust has been consumed in the process at Zaclon and the area where it was stored is no longer being used for storage of hazardous waste. You must also prepare and submit for Ohio EPA's approval a closure plan in accordance with OAC rule 3745-56-58(C).

1.c. Zaclon receives and stores hazardous waste spent stripping acid from off-site facilities. As noted above, Zaclon does not hold a hazardous waste permit. The stripping acid is stored in two tanks at the facility prior to use. To use the stripping acid, Zaclon must put the acid through a two step reclamation process. During the August 2005 inspection, the Zaclon representatives told Ohio EPA that if raw materials were used in the process, these reclamation steps would not be necessary. The stripping acid does not meet the requirements set forth in OAC rule 3745-51-02(E)(1)(a) since it is not directly used or reused in an industrial process to make a product without being reclaimed.

Zaclon therefore needs to either put this hazardous waste directly into the reclamation portion of the system without any prior storage, cease receiving this spent stripping acid hazardous waste permanently, or cease receiving this spent stripping acid hazardous

- iii. The rags and solvents used to clean at the facility. The potential contaminants and solvents getting on the rags need evaluated for all the different areas in the facility that use rags. This should be specifically documented and if necessary a hazardous waste management protocol developed.
- iv. The sock filters found in a bin next to the CWZ used to filter the zinc chloride. Ohio EPA has concerns that the filters may be contaminated with heavy metals during the processing of the SASH.
- v. Ohio EPA noted a red unlabeled drum and an unlabeled pail in Shop #2.
- vi. There was spent oil dry by the hazardous waste roll off box in (under) BLDG #39. It was unclear as to how this waste is characterized and managed.
- vii. There was a significant amount of oil dry in the accelerator building near the satellite accumulation area. Since the accelerator hazardous waste is characteristically hazardous for ignitability (D001) and benzene (D018) it needs to be determined if the floor dry exhibits any of these characteristics.
- viii. Ohio EPA noted floor dry being used at both hazardous waste sludge generation points at the facility. Zaclon needs to determine if these are hazardous waste; if so, they need to determine if it can be placed in the EnviroServe roll-off boxes.

For the wastes noted above in *i* through *viii*, please document the waste characterization either through generator knowledge or analytical results. If Zaclon wants to use generator knowledge for the characterization of any of these wastes, you should include the specific MSDS and process description to substantiate the characterization.

2.b. Zaclon removes debris (wood, metal, supersacks, etc.) from the SASH in the waste pile as a first treatment step to make the SASH usable in the production of zinc chloride. This step generates a waste (the debris) which must be evaluated. At the time of the inspection, Zaclon was placing the debris in an unlined Waste Management roll-off box to be managed as a non hazardous waste. Zaclon representatives stated that this was the first box to be generated, previous to this, any debris remained in the waste pile.

During the inspection, Ohio EPA discussed with you various options for characterizing this waste. It is Ohio EPA's understanding that Zaclon will segregate out the scrap metal and send this off for metal recycling. The rest of the debris will be managed as characteristically hazardous debris for cadmium (D006) and lead (D008). If this is still Zaclon's intention, please confirm this in writing.

2.c Zaclon sent four (4) 20 yard roll-off boxes to Vexor in 2004. The waste was from the residue from a sulfuric acid tank and was shipped as a non-hazardous waste.

Zaclon should submit any toxicity characteristic leaching procedure (TCLP) analytical results they have for this material.

therefore a waste. If Zaclon claims the material is not a waste, they must demonstrate/document it is a usable product. For example, Zaclon could go through an inventorying process to demonstrate the material is not a waste.

The first step in documenting what this waste is and how it should be managed is for Zaclon to develop an inventory, with quantities, origins of the source and current locations of the waste. Ohio EPA would then encourage Zaclon to use any of the waste found in BLDG #13 in their processes if it is a legitimate use of the waste. Even if the waste cannot be used immediately, if Zaclon does not believe it to be a waste since it has value for a specific process, then that material should be managed and stored in a manner which demonstrates that it has value to Zaclon. To do this, the inventory and storage of usable material should be such that it can be found for use when a process is restarted and document/demonstrate how it can be used. Any material that cannot be used is a waste and will need to be characterized and disposed appropriately.

2.e The most recent analytical data for the iron mud is several years old. This mud is combined with the wastewater treatment sludge and disposed of as a non-hazardous waste. Since Zaclon has changed the process, this mud needs to be re-sampled for characterization.

Zaclon must submit the waste characterization data for the iron muds, including, but not limited to, the sampling methodology documenting the sample(s) are representative, the chain-of-custody documentation of the sample and the laboratory report.

3. Generator Identification Number, OAC rule 3745-52-12: A generator may not treat, store, dispose of, transport, or offer for transportation hazardous waste without having received a U.S. EPA identification number from U.S. EPA or Ohio EPA. A generator who has not received a U.S. EPA identification number must obtain one by applying to Ohio EPA using Ohio EPA form EPA9029.

The generator identification number OHD004184768 was issued to Zaclon Inc. During the inspection Ohio EPA was told that the new operator is Zaclon LLC, which is a separate legal entity from Zaclon Inc. A "generator" is defined in OAC rule 3745-50-10(A)(45) as any person, by site, whose act or process produces hazardous waste as identified or listed in Chapter 3745-51 of the Administrative Code or whose act first causes a hazardous waste to become subject to the hazardous waste rules.

While it is true that the same identification number will be issued to Zaclon LLC that was issued to Zaclon, Inc., Zaclon LLC still needs to complete EPA Form9029 to switch the number to the appropriate owner. You can renotify and have the hazardous waste identification number assigned to Zaclon LLC by going to the following web site and following the instructions for the Notification of Regulated Waste Activity form: http://www.epa.state.oh.us/dhwm/notiform.html.

4. Annual Report, OAC rule 3745-52-41(A)(5): A generator who ships any hazardous waste off site must prepare and submit to Ohio EPA the "Annual Hazardous Waste

to include the zinc muds. Exhibit H should be updated to include the weekly inspection logs currently being used at the facility. If Zaclon chooses to update the weekly inspection log to include the emergency equipment, then this copy should be included. If a separate emergency equipment log is developed, that too should be included.

6. Personnel Training, OAC rule 3745-52-34(A)(4); OAC rule 3745-65-16(A)(2); and OAC 3745-65-16(A)(3): The personnel training program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste procedures, including contingency plan implementation, relevant to the positions in which they are employed. Additionally, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing hem with emergency procedures, emergency equipment and emergency systems.

Zaclon did not include their contingency plan in the personnel training program which would include the emergency procedures, equipment and systems.

Once Zaclon has updated their contingency plan, they must train the required facility personnel on its use and submit documentation demonstrating the personnel have been trained.

- 7. Contingency Plan Requirements, OAC rules 3745-65-52(A) through (F): The contingency plan must include [in part] the following elements:
 - a. Actions to be taken in response to fires, explosions or any unplanned release of hazardous waste
 - b. A current list of names, addresses and telephone numbers (office and home) of all persons qualified to act as emergency coordinator
 - c. A list of all emergency equipment, including: location, physical description and brief outline of capabilities
 - d. An evacuation plan for facility personnel where there is a possibility that evacuation may be necessary.

Zaclon's contingency plan refers one to the plant safety manual for fire and disaster procedures and spill control plans. However, in the plant safety manual, there is no mention of hazardous waste. The contingency plan must be updated to include actions to be taken in response to fires, explosions or unplanned releases of hazardous waste.

The telephone numbers for the emergency coordinators should include the area codes with the telephone numbers. Also, Jon Hall will be using his cell phone as his home telephone number and this should be noted in the plan.

On June 19, 2005, there was a fire in building #39 which involved brass fines and rolling mill fines which had been stored at Zaclon since the mid 1990's. The process which utilized these materials has not been used for a similar length of time. Since the materials were either sludges (air pollution control dust) or by-products which exhibit a characteristic of a hazardous waste that was never recycled, the materials are a hazardous waste.

The fire department was notified and responded. Since the contingency plan did not have any actions in it to follow should there be an emergency, it would be impossible to comply with OAC rules 3745-65-56(A) through (H). The facility should have submitted a report to the Director of Ohio EPA within 15 days of the incident as required by OAC rule 3745-65-56(J).

Zaclon is already revising the contingency plan per the violations noted above. Zaclon must submit the report to the Director, even though it will be late, as required by OAC rule 3745-65-56(J). A copy must be sent to this office to document compliance with this regulation.

11. Maintenance/Design and Operation of Facility, OAC rule 3745-65-31/OAC rule 3745-54-31: Facilities shall be operated to minimize the possibility of a fire explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

The operation in the Accelerator Building where the ignitable waste is generated is not operated to minimize fire, explosion or any unplanned release of hazardous waste. The accelerator waste had filled the secondary containment pallet to the point it may be overflowing. There were significant amounts of contaminated floor dry in the satellite accumulation area. There was hazardous waste on top of the drums in the accumulation area. Finally, the most recent weekly inspection of this area (conducted on August 9, 2005) indicated that there were no problems in the area.

Zaclon must empty the secondary containment, clean up the floor dry and clean the tops of all the hazardous waste drums in the accumulation area and document this via photographs. In addition, the operator of the area needs to be trained in the proper management of hazardous waste. The person conducting the weekly inspections needs to be trained in noting these problems and ensuring that if they occur again, that the problem is addressed immediately.

Zacion must control the ongoing releases of hazardous waste from the hazardous waste pile (SASH pile). Zacion must containerize or somehow remove the material from the pad to eliminate the tracking, run off and wind dispersal of the hazardous waste.

Documentation (e.g. photographs, etc.) demonstrating that these waste areas are now being maintained and operated in accordance with the rule should be submitted to document compliance.

Zaclon must label these containers and submit photographs documenting the containers have been labeled. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

15. Labeling Requirements for Hazardous Waste Containers, OAC rule 3745-52-34(A)(3): Containers accumulating hazardous waste must be clearly marked with the words "Hazardous Waste."

The box containing the debris from the SASH pad was not marked with the words "Hazardous Waste."

Zaclon must label the box with the words "Hazardous Waste" and submit a photograph documenting compliance with this rule. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

16. Labeling Requirements for Hazardous Waste Containers, OAC rule 3745-52-34(A)(2): Containers accumulating hazardous waste must be clearly marked with the date accumulation began.

The box containing the debris from the SASH pad did not have an accumulation date on it. In addition, the box containing the heavy metal sludge from the zinc chloride production did not have the year marked on it.

Zaclon put the year on the heavy metal sludge from the zinc chloride production during the inspection. No further action is required for this container. Zaclon must submit a photograph documenting that the container of debris has been marked with an accumulation date. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

17. Requirements for Hazardous Waste Containers, OAC 3745-66-73(A): Containers of hazardous waste must be kept closed except when adding or removing waste.

The following containers were open at the time of the inspection:

- a. The roll off box containing the debris from the SASH pile
- b. The hazardous waste box in BLDG #39 accumulating the waste from the production of galvanizing fluxes was open.
- c. The satellite container collecting the accelerator waste in BLDG #27W had the hose from the reactor in it.

19. Packaging of universal waste lamp, OAC rule 3745-273-13(D)(1): Universal waste lamps must be contained in containers or packages that are structurally sound, adequate to prevent breakage, and are compatible with the contents of the lamps. In addition, the containers or packages must be closed, lack evidence of leakage, spillage or damage that could cause leakage.

The box of spent fluorescent bulbs in BLDG #39 was open. Also, there was nothing in between the bulbs to prevent possible breakage.

Ohio EPA noted three (3) spent fluorescent bulbs in the office of BLDG #14, several loose bulbs and some still in the fallen lights in BLDG #92 and several bulbs in BLDG #13. These bulbs must be collected and managed with the bulbs in BLDG #39.

Zaclon shall procure a box/container for the spent fluorescent lamps which is adequate to prevent breakage of the lamps and which can be kept closed. Zaclon shall label the box in accordance with OAC 3745-273-14 (E) (see violation 20 below) and submit a photograph demonstrating compliance with this rule.

20. Labeling/marking- standards for small quantity handlers of universal waste, OAC rule 3745-273-14(E): Universal waste [fluorescent] lamps shall be labeled as "Universal Waste - Lamps," "Waste Lamp(s)," or "Used Lamp(s)."

The box containing the spent fluorescent bulbs was not labeled. In addition, the various bulbs noted in violation 19 above were not labeled.

Please document via photograph(s) that all containers are labeled to document compliance with this regulation. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

- 21. Accumulation time limits standards for small quantity handlers of universal waste, OAC rule 3745-273-15(C): A facility must be able to demonstrate the length of time that a universal waste has been accumulated. There are six ways to document the accumulation time:
 - a. Marking or labeling the container with the earliest date when the universal waste became a waste.
 - b. Marking or labeling individual item(s) of universal waste with the earliest date that it became a waste,
 - c. Maintaining an inventory system on-site that identifies the date the universal waste became a waste,

The manifest to Spring Grove dated February 26, 2003 did not have line 11b on the land disposal notification for 5600 pounds of ignitable (D001), corrosive (D002) and chromium (D007) contaminated waste.

Zaclon must update their copies of the LDR and notify Chemtron and Spring Grove to be sure their copy of the LDR is also updated.

24. Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(2), Table 1: The generator of a hazardous waste which does not meet the treatment standard must determine the correct "treatability group(s)" (e.g. wastewater, non-wastewater, etc.)

Manifest 05007 dated August 9, 2005 to Chemtron had a waste on the manifest which in the description was noted as a "waste solid." However, on the LDR form, it was listed as a "wastewater."

Zaclon must notify Chemtron to be sure that their copy of the LDR has been corrected and correct the copy they have on site.

25. Retention of Land Disposal Restriction Forms, OAC rule 3745-270-07(A)(8): The generator must retain on site a copy of all notices, certifications, demonstrations and waste analysis data for at least three years from the last shipment of waste sent off-site.

During the inspection, Zaclon could not find the completed land disposal restriction (LDR) form for the waste shipped to Chemtron on July 15, 2004. Chemtron faxed a copy of the LDR to Zaclon during the inspection abating this violation. However, line 11a did not include the D005 waste code in violation of OAC rule 3745-270-07(A)(1).

Please demonstrate that Chemtron has been notified to correct their copy of the LDR form.

26. Retention of Land Disposal Restriction Forms, OAC rule 3745-270-07(A)(8): The generator must retain on site a copy of all notices, certifications, demonstrations and waste analysis data for at least three years from the last shipment of waste sent off-site.

During the inspection, Zaclon could not find the LDR for the zinc waste stream sent to Envirite with the waste profile number CS5377.

Zaclon must submit a copy to Ohio EPA documenting that an LDR has been completed for this waste stream.

27. Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(7), If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous waste or waste, or is exempt from regulation as a hazardous waste under rule 3745-51-

the bottom of the containment could not be determined. The Zacion representatives stated that the liquid is recycled back into the process. Ohio EPA has concerns that if this material is hazardous, which it might be depending on the materials being processed, and it was to be released from the containment, it would be a release of hazardous waste. Zacion must empty the secondary containment, determine the condition of the containment, and make any repairs necessary. In addition, Zacion must not allow liquids to sit in the containment; but must immediately place the liquid back into the tank if the process will allow, or into a holding container while it awaits processing.

- Zaclon stated that a portion of BLDG #24 was going to be demolished by the end of 2005. Zacion stated that the asbestos abatement had already occurred. Please be aware that demolition debris is subject waste characterization per OAC rule 3745-52-11. One way of minimizing the potential of the demolition debris being characterized as a hazardous waste is to remove any and all materials that may cause the waste to be hazardous. This would include mercury switches, light ballast, light fixtures, fluorescent bulbs, etc. Another step which may be taken to characterize the demolition debris is to determine if there is any lead paint on the portion of the building to be demolished.
- 33. OAC rule 3745-52-34(C)(1) {Satellite} Accumulation Requirements for Hazardous Waste Containers requires a generator who exceeds 55 gallons in a satellite accumulation area to move the excess from the area within three days or the area becomes subject to all of the requirements in OAC rule 3745-52-34(A) or other applicable provisions of Chapter 3745-52.

The hopper collecting the heavy metal sludge from the production of the zinc chloride can collect an excess of 55 gallons. During the inspection, it only contained approximately 50 gallons of waste. Ohio EPA discussed with you the various options Zaclon can take to maintain this area as a satellite accumulation area. It is Ohio EPA's understanding that Zaclon will empty the hopper every time the press is used, ensuring the waste will not sit in the hopper for three days or more.

Please confirm this understanding in writing. If Zaclon wishes to comply with this regulation in another manner, please document how this will be accomplished.

Ohio EPA had concerns when reviewing the manifests in regards to the manifest numbered 00104 to Chemtron Corporation on July 7, 2005. The concern was in regards to how Zaclon split box #12 - "Containers and Type" into two. On the top half of the box Zaclon marked "001 DF" and on the bottom, "007 DM." Zaclon also had two different quantities marked for each container type in box #13. On August 30, 2005, I spoke with a representative of PUCO and was told while it does not appear that this is a violation, Zaclon should note that 49 CFR § 172.201 (a)(2) requires the shipping description on a shipping paper and all copies thereof used for transportation purposes must be legible and printed (manually or mechanically) in English. While Ohio EPA

containers were labeled; many of the containers were in very poor condition, many of the containers were open allowing rain water to get in with the "usable" material and finally, Ohio EPA was not convinced Zaclon knew precisely what each container held. Ohio EPA asked that the material in the containers in poor condition be transferred to new containers. Ohio EPA also asked for the drums/containers to be labeled, drums to be closed and the drums to be managed in such a way that it is obvious the material has value to Zaclon.

The first step in documenting what this waste is and how it should be managed is for Zaclon to develop an inventory, with quantities, origins of the source and current locations of the waste. Ohio EPA would then encourage Zaclon to use any of the waste noted above in their processes if it is a legitimate use of the waste. Even if the waste cannot be used immediately, if Zaclon does not believe it to be a waste since it has value for a specific process, then that material should be managed and stored in a manner which demonstrates that it has value to Zaclon. To do this, the inventory and storage of usable material should be such that it can be found for use when a process is restarted and document/demonstrate how it can be used. Any material that cannot be used is a waste and will need to be characterized and disposed appropriately

Ohio EPA noted a sand blasting unit is the weld shop. Zaclon representatives stated that no waste had been disposed from the unit. Ohio EPA informed Zaclon that the waste would need to be characterized per OAC rule 3745-52-11 prior to disposal.

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (i.e. source reduction). For those wastes and pollutants that are generated, the second is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment and improve your public image by implementing pollution prevention programs. The Office of Compliance Assistance and Pollution Prevention provides compliance and pollution prevention assistance on environmental web water. Their and land related air. to issues http://www.epa.state.oh.us/opp/ocapp.html.

The Division of Hazardous Waste Management has created an electronic news service to provide you with quick and timely updates on events and news related to hazardous waste activities in Ohio. You can find more information at the following Web link http://www.epa.state.oh.us/dhwm/listserv.html.

Failure to list specific deficiencies and/or violations in this communication does not relieve Zaclon from the responsibility of complying with all applicable laws, rules and regulations.

Further be advised that any instances of noncompliance can continue as subjects of pending or future enforcement actions.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

September 8, 2005

Henry R. Stonerook, P.E., DEE President Stone Environmental 6460 Busch Blvd., Suite 105 Columbus, OH 43229

re: Recycled Zinc Chloride Solution

Dear Mr. Stonerook:

This letter is in response to your letter dated August 1, 2005, to Ernest Waterman, Chief of the Hazardous Waste Unit at EPA, Region 1. In that letter, you request a regulatory interpretation regarding a practice by your client, V&S Taunton, who recycles stripper solution from a galvanizing process. In particular, you would like a determination from EPA that the process described is in fact raw material recycling and not the handling of hazardous waste. You also mention that the Massachusetts Department of Environmental Protection (MADEP) has indicated that a recycling permit would be required for the process. Again, you feel that your client is handling a raw material which is not subject to hazardous waste regulations and, therefore, no state recycling permit should be required.

As background to this topic, we understand that V&S Taunton is a "hot dip galvanizing" facility. The "hot dip" process involves cleaning, pickling and fluxing of steel prior to immersion in a kettle of molten zinc. The zinc coated steel parts are then quick-cooled by air-cooling and/or immersion in a water quench. Over time there is a build-up of zinc and iron chloride in the pickle tanks requiring that these tanks be recharged. In the past, the spent materials removed from the tanks were manifested off-site as a hazardous waste. V&S Taunton has modified the "hot dip" process by adding additional tanks to separate the pickling process from the stripping process, the "stripper" tanks remove zinc from fixtures and previously galvanized fabrications. The resulting material (stripper solution) is collected from the stripper tank and shipped to Zaclon, Inc., a zinc chloride manufacturer in Ohio. Zaclon uses this material as an ingredient in the manufacturing of zinc ammonium chloride galvanizing fluxes. Prior to use, the stripper solution is treated by Zaclon to remove heavy metals and iron from the zinc chloride solution. The resulting heavy metal sludges are disposed of as hazardous waste and the resulting iron hydroxides are disposed of as non-hazardous wastes.

Following a review of the information you provided and after discussions within the Region, with MA DEP, and with EPA, Region 5, we have come to the conclusion that the stripper solution removed from the stripper tanks is a solid waste. The basis for our solid waste determination is that we consider the stripper solution to fall into the category of a spent material being reclaimed (see 40 CFR Part 261.2). The definition of "spent material" includes any

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Henry Stonerook September 8, 2005 Page 2

material that has been used and as a result of contamination can no longer serve the purpose for which it was originally produced without processing. A material is reclaimed if it is processed to recover a useable product. As is noted above, Zaclon treats the material prior to use. Note that the EPA has broadly interpreted spent materials to include materials which need to be reprocessed due to any impurity, factor or circumstance which causes the material to be taken out of service. See Memorandum, Shapiro to Hazardous Waste Division Directors, March 24, 1994. In addition, the EPA regulations require persons generating solid wastes to determine whether the solid waste is hazardous. 40 CFR 262.11 sets forth the generator's responsibilities to determine whether its waste is hazardous. Given the acknowledgement in your letter that the stripper solution is a hazardous material it appears likely it is also a hazardous waste.

Finally, please note that the Commonwealth of Massachusetts, in accordance with Section 3006 of the Resource Conservation and Recovery Act (RCRA), is authorized to administer and enforce the base RCRA program in lieu of the federal program. Therefore, we suggest that you continue your discussions with the MADEP regarding applicable state regulations which may go beyond the minimum federal requirements.

If you have any questions regarding this response, please do not hesitate to contact Sharon Leitch, in the Hazardous Waste Unit, at (617)918-1647.

Sincerely,

Marvin Rosenstein, Chief Chemicals Management Branch

enclosure

cc:

- E. Waterman, Chief, Hazardous Waste Unit, EPA
- K. Rota, Chief RCRA Enforcement Unit, EPA
- J. Fowley, Atty., ORC-EPA
- J. Miller, Chief, Waste Branch, MADEP
- J. Duclos, Supervisor, Hazardous Waste Compliance Section, NHDES
- R. Isner, Director, WEED, CTDEP
- L. Grandchamp, Chief, Waste Management, RIDEM
- S. Ladner, Supervisor, Licensing Unit, MEDEP
- P. Marshall, Chief, Hazardous Materials Management Division, VTDEC
- G. Hunt, Section Chief, Compliance & Enforcement, MA DEP SERO
- M. Cunningham, Enforcement and Compliance Assurance Branch, EPA, Region 5

March 24, 1994.

MEMORANDUM

SUBJECT: Defi

Definition of Spent Material

FROM:

Michael Shapiro, Director

Office of Solid Waste

TO:

Hazardous Waste Management Division Directors

Regions I-X

The purpose of this memorandum is to clarify when a secondary material meets the definition of "spent material". A spent material is "any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without further processing." 40 CFR §261.1(c)(1). A number of EPA Regions have requested assistance from EPA Headquarters on making regulatory determinations for secondary materials that may meet the regulatory definition of spent material. For many secondary materials this determination is important because spent materials being reclaimed are solid wastes. 40 CFR §261.2(c)(3). However, sludges and byproducts that exhibit a characteristic of a hazardous waste and commercial chemical products (whether listed or characteristic) are not solid wastes when reclaimed. 40 CFR §261.2(c).

In particular, EPA Headquarters has been asked whether in order to meet the definition of spent material, a material must: 1) be spent as a result of contamination, and 2) be nonfunctional in the sense that it could not continue to be used for its original purpose. We have consistently interpreted this definition as applying to "materials that have been used and are no longer fit for use without being regenerated." 50 FR at 618 (January 4, 1985); 48 FR at 14476 (April 4, 1983). We thus consider "contamination", as used in the definition of spent material, to be any impurity, factor or circumstance which causes the material to be taken out of service for reprocessing. (See also 50 FR at 624, indicating that the reference to contamination was added to clarify that a material such as a solvent may continue to be used for its original, though not identical, purpose and not yet be classified as a solid waste.)

Regarding whether a material must be nonfunctional to meet the definition of spent material, the fact that a material can continue to be used for its original purpose is not relevant to the issue of whether or not it is a spent material when it is clear from the facts that the material will not be used but instead will be treated by reclamation. The mere potential for continued original use does not preclude a material from being defined as spent. As stated above, the fact that it is actually removed from service establishes, as to this generator, that it can no longer serve its original purpose.

If all that were required to avoid RCRA Subtitle C regulation would be a showing that a secondary material could continue to be used, then generators would be able to circumvent RCRA simply through changing their operating practices to remove secondary materials just prior to that material being unfit for its original use. Thus, spent solvents that are heavily contaminated but might still be fit for metal degreasing (even though they were being sent to be regenerated into new solvents), spent lead-acid batteries that still had a charge (or were capable of holding a charge), and mercury-bearing thermostats removed from buildings sent for reclamation would not be subject to RCRA regulation in spite of the fact that the generator was no longer using the material but instead was sending it to be treated by reclamation.

Clearly, this result is not consistent with the cradle-to-grave purpose of RCRA Subtitle C regulation. Used materials taken out of service and sent for reclamation also pose the same risks and are handled in the same manner regardless of the reason they are taken out of service. For this reason, EPA has consistently interpreted spent materials as including materials which could continue to be used for their original purpose but are, in fact, being taken out of service for reclamation, showing that for this generator they can no longer serve the purpose for which they were produced.<2>

Conclusion

Because spent materials being reclaimed (or to be reclaimed) are within the definition of solid waste, it is important to be able to distinguish among spent materials, other categories of solid wastes such as sludges, and products which are still in use that have not been discarded. Spent materials are distinguished from products and other categories of solid wastes in that they have been used previously and have been taken out of service and are going to be treated by reclamation. Examples of spent materials include spent lead-acid batteries, used mercury switches, spent solvents, spent catalysts and spent etchants.

This memorandum states the Agency's consistent interpretation of the existing regulations. However, EPA recognizes the issues regarding the regulatory definition of spent material and we may consider revising the regulatory definition in the future. If you have further questions on this issue, please call Mike Petruska of my staff at (202) 260-8551.

cc: Susan Bromm
Susan O'Keefe
NEIC, Frank Covington

See 50 FR at 650 (January 4, 1985), indicating that spent batteries, spent mercury, spent acids and



6460 Busch Blvd., Suite 105 Columbus, OH 43229 P 614*888*8041 F 614*888*8043 mail@stoneenvironmental.com www.stoneenvironmental.com

August 1, 2005

Mr. Ernest Waterman, Chief Hazardous Waste Unit, Office of Ecosystem Protection U.S. Environmental Protection Agency – New England Office One Congress Street Suite 1100, Mail Code: CHW Boston, MA 02114 AUG - 2 2005
HAZARDOUS WASTE PROGRAM UNIT

Request for Determination Recycled Zinc Chloride Solution

Dear Mr. Waterman:

Stone Environmental Engineering & Science, Inc. (Stone Environmental) represents V&S Taunton Galvanizing, LLC, (V&S Taunton) a hot-dip galvanizing facility that has a new, state-of-the-art operation in Taunton, MA. The facility opened for business in late 2003. V&S Taunton is part of Voigt & Schweitzer, Inc. which operates hot-dip galvanizing plants in several eastern states including Ohio, Michigan, Pennsylvania (two facilities), West Virginia, Virginia, and New Jersey.

The purpose of this letter is to formally request a determination from U.S. EPA that the zinc chloride generated from the V&S Taunton operations is a recycled material and is not subject to regulation as a RCRA hazardous waste. We are providing the following information to you to aid in your determination:

- Description of the galvanizing operations at V&S Taunton; and,
- Confidential information from Zaclon, the company which purchases the zinc chloride from V&S Taunton.

Please note that V& S Taunton received a notice of violation from Massachusetts DEP (MADEP) for not having a recycle permit for this material. We have since filed an application with MADEP for this permit, but we believe that if the material in question is indeed a raw material for Zaclon's operation, then no state permit is required. As the notice of violation and a pending consent decree are currently being considered, we would appreciate a quick response from you concerning your evaluation of this situation. Please contact me if you have any questions.

Sincerely,

Stone Environmental

My R. Stonwood

Henry R. Stonerook, P.E., DEE

President

Enclosures

DESCRIPTION OF GALVANIZING OPERATIONS V&S TAUNTON GALVANIZING, LLC

V&S Taunton Galvanizing is a "hot dip galvanizing" operation that coats steel fabrications made by various customers with zinc metal to provide enhanced corrosion protection. The hot dip galvanizing operation is comprised of cleaning, pickling, and fluxing the steel prior to immersion in a kettle of molten zinc. The zinc coated steel parts are then quenched (quick cooled) either by air-cooling and/or by immersion in a water quench. A flow chart of the hot dip galvanizing process is presented in Figure 1.

The plant galvanizes large and small structural steel fabrications as well as small parts. The steel is chained, wired or otherwise packed in fixtures which are used as well during the dipping in the hot molten zinc. The chains, wires, and fixtures are reused as part of the operation. In traditional hot dip galvanizing, these devices would be coupled to the next batch of fabrications and then passed through the regular pickle tanks as shown in the flow chart. Over time, this resulted in a build up of zinc chloride and iron chloride in the pickle tanks. When the pickle tank needed to be recharged, the liquids were manifested off-site as hazardous waste material.

By themselves, both zinc chloride and iron chloride are good raw materials. Zinc chloride is a common product used in the film industry and to make fluxes. Iron chloride is a common product for use as a water treatment chemical. When combined, the mixture is not usable, and separating the zinc chloride from the iron chloride is complicated and costly.

Recognizing an opportunity, Voigt & Schweitzer has invested in additional tanks to separate the pickling process from the stripping process. At all of its North American operations, including V&S Taunton, Voigt & Schweitzer uses a separate tank (stripper) to remove the zinc from the fixtures as well as from fabrications that have previously been galvanized. The resulting material can be used directly by zinc chloride manufacturers like Zaclon, Inc. The alternative is for them to dissolve zinc substrates in hydrochloric acid as a pre-stage process.

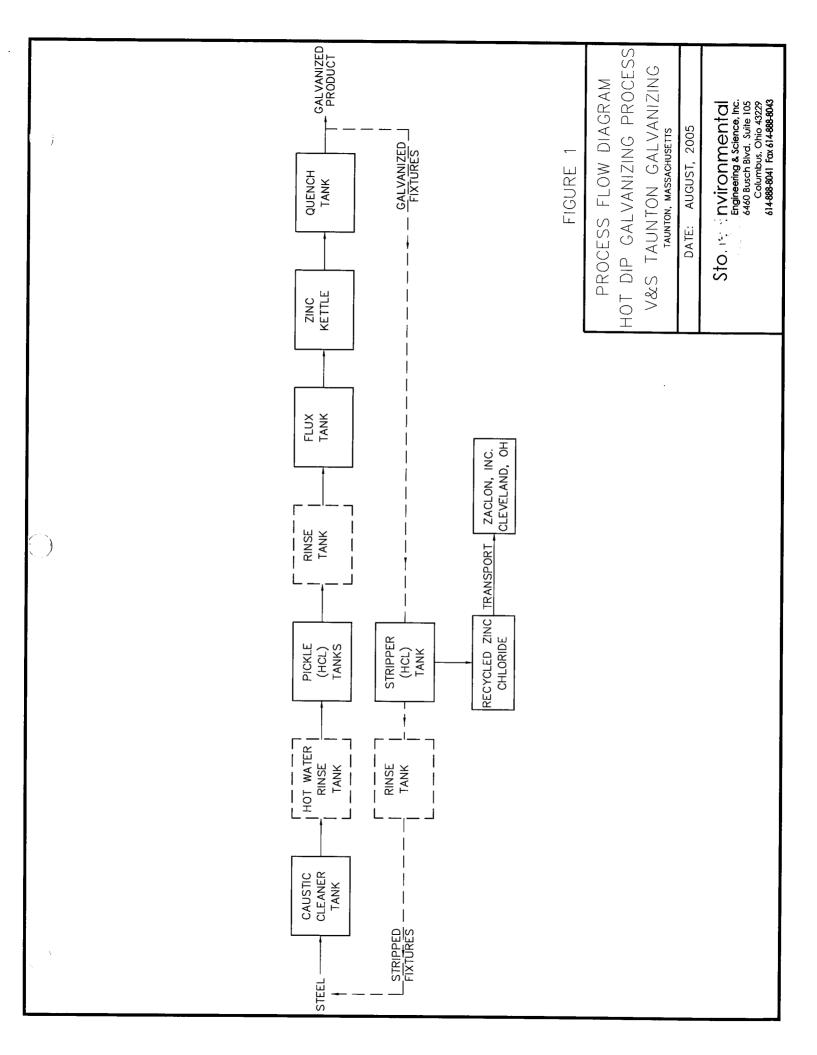
In addition to the zinc chloride solution, the iron chloride solution from the other pickling tanks is a usable feed material for producers of iron chloride such as Dupont.

Transportation

The zinc chloride is transferred by tanker truck as a hazardous material to Zaclon's facility in Cleveland, Ohio. The trucks collect the zinc chloride directly from the stripper tank at the V&S Taunton facility.

Zaclon Process Description

Attached is a detailed description of Zaclon's processing of zinc chloride at its operations in Cleveland. Zaclon requests that this information be kept confidential.





June 16, 2005

Werner Niehaus President Voigt & Schweitzer USA 1000 Buckeye Park Road Columbus, Ohio 43207

Dear Werner,

This letter and related attachments is provided to describe Zaclon's use of your stripping acid (also referred to as "Zinc Chloride Solution – Crude Grade, Galvanizer's Strip Acid" in Zaclon Raw Material Specification # 027692) as a raw material in our manufacture of galvanizing fluxes. In chemical manufacturing, the term "raw material" is commonly used to mean an ingredient suitable for use to produce a finished product. In this case, the finished product is Zinc Ammonium Chloride galvanizing fluxes. The information being provided is proprietary and confidential. You may, however, share this information with those who have a need to know it within your own organization as well as with your environmental consultants and regulatory agencies. Please do not share it with others.

Zaclon's manufacturing process to produce galvanizing fluxes is complex. Zaclon uses both primary and secondary sources of zinc and zinc chloride to produce galvanizing fluxes. Some of these sources are solid materials, and some are liquids. Stripping acid is one of the liquid secondary raw materials used. A simplified block diagram flow sheet of the overall process is attached. This diagram is labeled "ZINC PRODUCTS FLOW SHEET – OVERALL ZINC PRODUCTS.

Stripping acid is received and unloaded into intermediate storage tanks. In these storage tanks, the stripping acid is often mixed with other zinc chloride solutions that have been produced by Zaclon by reacting zinc containing solid secondary materials with hydrochloric acid. These zinc chloride solutions are then transferred to two treating steps prior to concentration to remove water. The two treating steps involve basicity adjustment and reaction with oxidizers and sequestering agents to remove heavy metals and iron from the zinc chloride solution. These treating processes are proprietary and are labeled TRACE METAL RECOVERY and IRON RECOVERY on the block diagram. The term "recovery" is misleading since Zaclon recovers neither the heavy metals nor the iron, but rather disposes of the heavy metal sludges as hazardous waste and the iron hydroxides as non-hazardous wastes. Following the treating steps, the zinc chloride solution is concentrated (cooked) to remove water and then fed into the SOLID ZACLON PROCESS to manufacture fluxes.

A second simplified flow sheet labeled ZINC PRODUCTS DEPT. FLOW SHEET - ZINC AMMONIUM CHILORIDE PROCESS is attached. In the Zinc Ammonium Chloride manufacturing process, Zinc Chloride solution is combined with Ammonium Chloride (produced by reacting Anhydrous Ammonia with Hydrochloric Acid) in a neutralizer. The

Confidential

NO.251

Zinc Ammonium Chloride solution is then filtered and crystallized to form the solid fluxes that are sold to galvanizers.

Zaclon's use of stripping acid as a raw material in the manufacture of Zinc Ammonium Chloride galvanizing fluxes was extensively reviewed by the Ohio Environmental Protection Agency (OEPA) in 1994. The OEPA's conclusion is that the stripping acid is not a waste since it is employed as an ingredient in an industrial process to make a product. A copy of a letter from the OEPA dated December 23, 1994 is attached. A more recent review of Zaclon's use of secondary materials by the United States Environmental Protection Agency (USEPA) has resulted in no issues related Zaclon's use of stripping acid as a raw material nor to its' RCRA exemption under federal law. Zaclon procures stripping acid as a raw material and manages it as such on our facility. A copy of Zaclon's Raw Material Specification # 027692 is attached.

One question which was raised by the Massachusetts Department of Environmental Protection in a phone conversation earlier this year relates to the notation in Zaclon's raw material specification which states that "MATERIAL NOT MEETING SPECIFICATION IS ACCEPTABLE". This is not an uncommon provision of a raw material specification and does not change the conclusions reached by Zaclon and the OEPA that stripping acid, as used by Zaclon in the manufacture of galvanizing fluxes, is not a waste. Nevertheless, Zaclon is considering revising our specification to eliminate this notation.

Werner, I hope that this information will be helpful to you. Should you require additional information, please feel free to call me.

Sincerely,

James B. Krimmel

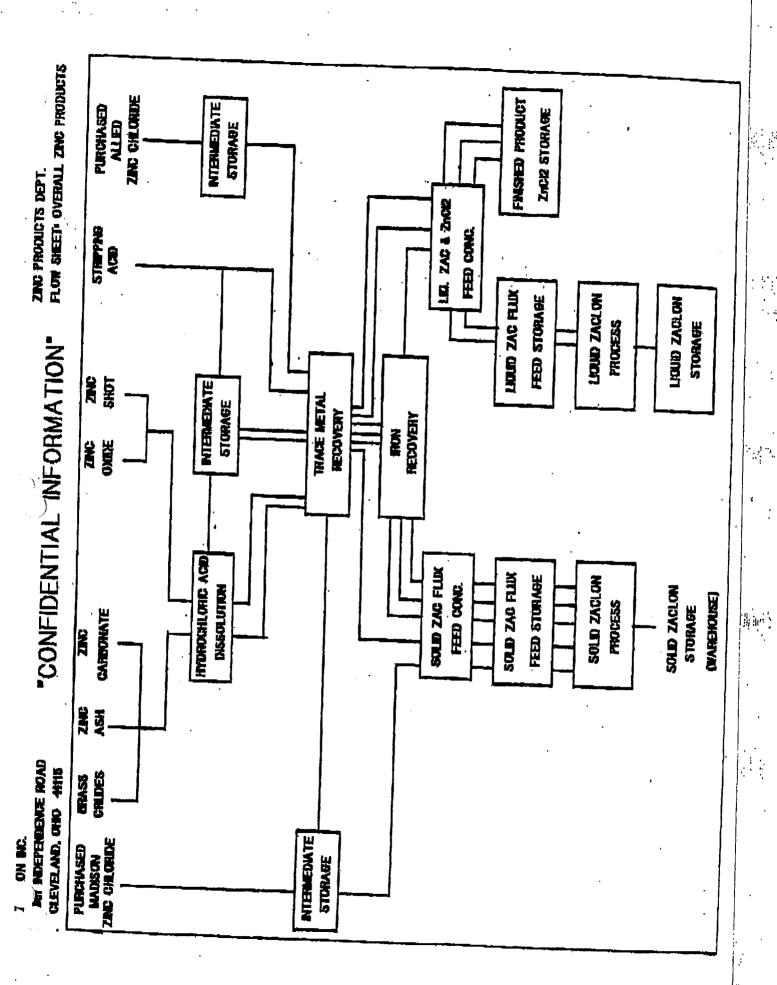
Lamber &

President

Zaclon, LLC

cc: JTT - Zaclon

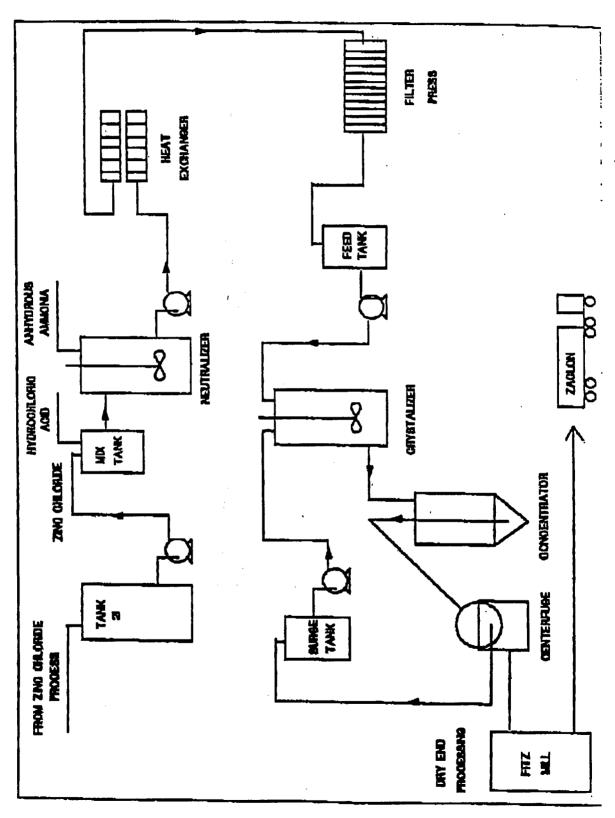
BMW - Zaclon



ACLON INC. 2981 INDEPENDENCE ROAD CLEVELAND, OHIO 44115

ZINC PRODUCTS DEPT.
FLOW SHEET ZINC AMMONIUM CHLORIDE PROCESS

CONFIDENTIAL INFORMATION"



ChicEPA

State of Ohio Environmental Protection Agency

Northeast District Office 2110 E. Aurora Road Twinsburg, Ohio 44087-1969 (216) 425-9171 FAX (216) 487-0769

George V. Voinovich
Governor

December 23, 1994

RE: ZACLON, INC. OHD 004 184 768

CERTIFIED MAIL

Mr. James Krimmel, President Zaclon, Inc. 2981 Independence Road Cleveland, Ohio 44115

Dear Mr. Krimmel:

On January 5, 1994, I conducted a hazardous waste inspection of your facility at 2981 Independence Road in Clevelard, Ohio. The purpose of this inspection was to assess compliance with Ohio regulations applicable to a generator of hazardous waste. Kristen Switzer and I conducted the inspection for the Ohio EPA with Zaclon represented by Joe Busovicki and yourself. A copy of the RCRA Inspection Report is enclosed for your information.

Zaclon is a large quantity generator of a hazardous waste sludge (D006 and D008). This sludge is generated by the facility's zinc ammonium chloride process and then accumulated in a 20 yard roll-off container located in a <90 day storage area. No violation of Ohio's hazardous waste regulations were discovered during this inspection.

Following this inspection, you were sent a letter dated January 14, 1994, requesting information about your zinc chloride process. This information was requested to aid this agency in determining whether or not the spent stripping acid being accepted by Zaclon was a hazardous waste.

The information (and other materials received from Zaclon since this initial submittal) indicates that Zaclon considers the stripping acid a product and that it is managed as such at the facility. This includes stipulating supplier specifications the stripping acid must meet before Zaclon will accept it. Materials are not wastes when they are reused in accordance with Ohio Administrative Code (OAC) 3745-51-02(E)(1)(a). A material is reused if it is employed as an ingredient, including as an intermediate in an industrial process to make a product (OAC 3745-51-01 (C)(5)(a)). As you explained, some raw materials purchased are processed similarly to the stripping acid. Therefore, the stripping acid which Zaclon accepts to use in their process to produce zinc chloride is not considered a waste and is therefore also not a hazardous waste. This determination is based on the information provided to the Ohio EPA.

Mr. James Krimmel - Zaclon, Inc. December 23, 1994 Page Two

Failure to list specific deficiencies in this communication does not relieve you from the responsibility of complying with all applicable regulations. If you have any questions, please call me at (216) 963-1231.

Sincerely,

Thomas J. Roth

Environmental Scientist Division of Hazardous Waste Management

TJR/fwn

Enclosure

CC: Laura Roberts, Hennepin County Dept. of Env. Mgmt. Ed Kitchen, DHWM, CO
Shannon Nabors, DHWM, CO
Paul Anderson, DHWM, NEDO
Laurie Stevenson, DHWM, CO

CONTROLLED

RAW MATERIAL SPECIFICATION

MATERIAL

NAME

ZINC CHLORIDE-SOLUTION

R.M. NUMBER:027692 DATE ISSUED:09/12/02 DATE REVISED:09/10/02 DATE SUPERSEDED:09/16/00

ALTERNATE

NAME

CRUDE GRADE, GALVANIZER'S STRIP ACID

PHYSICAL DESCRIPTION

Formula:

Appearance:

Physical Consts:

HCI

COLORLESS TO GREEN LIQUID

VARIOUS BAUME'S

VARIOUS IRON & ZINC CONTENT

SPECIFICATIONS

Property

% ZINC CHLORIDE

% DISSOLVED IRON

Limits

25 % MIN.

3.0% MAX.

Test Method

9775-0014

9775-0002

MATERIAL NOT MEETING SPECIFICATION IS ACCEPTABLE. HOWEVER, A PRORATED CHARGE WILL BE ASSESSED THAT IS COMMENSURATE TO THE AMOUNT THE SPECIFICATION IS NOT MET.

PACKAGING

Containers:

TANK TRUCK

Spec. Instr.:

NO CERTIFICATE OF ANALYSIS IS REQUIRED. ANALYZE FOR % DISSOLVED IRON AND %

ZINC CHLORIDE BEFORE UNLOADING.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

122

REGION 1 1 CONGRESS STREET, SUITE 1100 BOSTON, MASSACHUSETTS 02114-2023

March 24, 2005

Mr Peter D. Ness Health & Safety Manager New Balance Athletic Shoe, Inc. Brighton Landing 20 Guest Street Boston, MA 02135-2088

Dear Mr Ness:

The purpose of this letter is to respond to your letter to me dated March 17, 2005. Your understanding of the testing that should be conducted to determine if the footwear in question would be a hazardous waste, if disposed, is correct. You are also correct in your understanding that the sample used for testing should be the entire shoe. The cadmium bearing plastic piece incorporated into the sole of the shoe does not need to be extracted for testing in isolation from the rest of the shoe.

I wish to note that, if the footwear is imported into the United States solely for the purposes of disposal (i.e it is brought in as a solid waste) and it is also a hazardous waste, then certain import requirements outlined in Title 40 of the Code of Federal Regulations Part 262, Subparts A and F will apply. I am aware from our initial phone call, that at this time you may seek to sell or donate the footwear within the United States and that disposal is not the only option for which the footwear is being imported.

If you have any questions on this letter, or I can be of any further assistance, please contact me at 617-918-1369.

Sincerely,

Ernest Waterman,

= W=

Chief of Hazardous Waste Unit



March 17th, 2005

Mr. Ernest Waterman Chief of Hazardous Waste Unit US EPA Region 1 1 Congress St. Suite 1100, CHW Boston, MA 02114-2023

Dear Mr. Waterman,

Thank you for taking the time to investigate our question regarding sample protocol for testing our footwear. As I mentioned, this footwear in question has a small piece of plastic incorporated into the sole of the shoe for purposes of stability. This piece when manufactured has a pigment added to the soft plastic which contains Cadmium.

The stability web when completed gets further incorporated into the sole and the final product, in this case athletic footwear. We were unaware of the Cadmium being a part of this piece until it was tested in the Netherlands where we learned it exceeded the EU limit of 100 ppm. As such we can not make this product available for retail sale in this region.

If the product is brought to the US for final disposition, which could be waste disposal, we need to perform a TCLP test to determine if the Cadmium levels are great enough to fail this test. The question posed was whether or not we would grind the entire shoe to create a homogenous mixture for sampling or whether we would need to isolate the component of the shoe which contains the Cadmium pigment?

This letter is to confirm that we would indeed grind the entire shoe prior to obtaining a uniform sample to carry out the TCLP test. Please review my interpretation and confirm this so that we may keep a record in our files if we do indeed bring these shoes to the US for final disposition.

Again, I thank you for your time you gave us on this matter.

Regards.

Health & Safety Mgr.

New Balance Athletic Shoe, Inc.